A Big Earth Data Platform for Three Poles

**Eddy covariance data in Hulugou sub-basin of alpine Heihe River (October - December, 2011)**

1、Description

1. Data overview:
Eddy covariance system is a micrometeorological measurement method.It USES the principle of vorticity correlation to measure the material exchange and energy exchange of the atmosphere cushion surface with a fast response sensor.The core of open circuit eddy covariance system is composed of CR1000 data collector, CSAT3 3d ultrasonic wind speed and direction sensor, and li-7500 open circuit CO2/H2O gas analyzer (EC150).The eddy covariance system is a newly purchased instrument of this project, which takes a long time to order. It was installed in early October 2011, and the data is relatively short.This data set is the vorticity covariance data of qilian station from October 1, 2011 to December 31, 2011 at 30min.
2. Data content:
The observation items are: horizontal wind speed Ux (m/s), horizontal wind speed Uy (m/s), vertical wind speed Uz (m/s), ultrasonic temperature Ts (Celsius), co2 concentration (mg/m^3), water vapor concentration (g/m^3), pressure press (KPa).The data sampling rate is 10Hz per second.
3. Space and time range:
Geographical coordinates: longitude: 99° 52’e;Latitude: 38°15 'N;Height: 3232.3 m

2、Keywords

Theme：Water vapor,Winds,Atmospheric pressure measurements,Pressure,wind speed,Atmospheric Water Vapor
Discipline：Atmosphere
Places：Heihe River Basin, Hulugou Basin
Time：2011

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：1.208MB

4.Data format：EXCEL

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.25 | - |
| west：99.87 | - | east：99.87 |
| - | south：38.25 | - |

5、Time frame:2011-10-09 02:47:15+00:00--2012-01-08 02:47:15+00:00

6、Reference method

References to data:

CHEN Rensheng. Eddy covariance data in Hulugou sub-basin of alpine Heihe River (October - December, 2011). A Big Earth Data Platform for Three Poles, doi:10.3972/heihe.087.2013.db2015

References to articles:

Chen, R.S., Song, Y.X., Kang, E.S., Han, C.T., Liu, J.F., Yang, Y., Qing, W.W., &Liu, Z.W. (2014). A Cryosphere-Hydrology Observation System in a Small Alpine Watershed in the Qilian Mountains of China and Its Meteorological Gradient. Arctic, Antarctic, and Alpine Research, 46(2), 505-523.

Han, C.T., Chen, R.S., Liu, Z.W., Yang, Y., Liu, J.F., Song, Y.X., Wang, L., Liu, G.H., Guo, S.H.,, & Wang, X.Q. (2018). Cryospheric Hydrometeorology Observation in the Hulu Catchment (CHOICE), Qilian Mountains, China. Vadose Zone Journal, 17(1), 1-18.

7、Supporting project information

8、Data resource provider

name: CHEN Rensheng
unit:
email: crs2008@lzb.ac.cn